

**REMARKS/ARGUMENTS**

Claims 1-40 are currently pending. Claims 1, 9, 17, 25, and 32 are independent. Claims 1-3, 9, 11-12, 17, 25-28, 32, 33, 35, and 36 are hereby amended. Claim 18 is cancelled. No claims have been added. No new matter has been added. Upon entry of the present amendment claims 1-17 and 19-40 will be presented for examination.

**Double Patenting rejection**

The Examiner rejected claims 1-40 as patentably indistinct from pending application 10/782,739. Applicant hereby submits a terminal disclaimer for the instant case, and therefore submits this rejection is overcome.

**Rejection of claims 1-4, 6-12, 14-20, 22-29, 31-36, 38-40**

The examiner rejected claims 1-4, 6-12, 14-20, 22-29, 31-36, 38-40 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,772,347 (Xie) in view of U.S. Pub. No. 2005/0086206 (Balasubramanian). Claim 18 has been cancelled, mooted this rejection with respect to his claim.

Applicant respectfully submits that Xie does not teach or suggest the limitation:

maintaining a frequency for the first URL component, wherein the frequency is a function of a number of occurrences with which messages containing the first URL component were rejected

and likewise that Xie does not teach or suggest the limitation:

generating an exception rule for the first URL component and its descendants responsive to the frequency of the first URL component satisfying a set of constraints

both of which are recited by independent claims 1, 9, 17, 25, and 32. The Examiner cites Xie, Col. 5, lines 10-15, as describing maintaining a frequency related to incoming messages (Office Action p. 4). However, applicant respectfully submits that this portion of Xie describes the *opposite* of the present claims. Specifically, this portion of Xie states

for certain rules, known as counter rules, the firewall engine will increment the count register and continue the search. If the count threshold is exceeded, or if the search locates a match for a non-counter rule, the search results are written to the status register.

The counter rules described by Xie allow a certain number of messages of a given type to pass, and then disallow remaining messages once that threshold is exceeded. Thus Xie only describes counting numbers of allowed packets, not numbers of rejections. By contrast, the present claims reject messages until the threshold is reached, and then generate an exception rule allowing the traffic. The Examiner admits in a later rejection that “Xie does not disclose dynamically generated rules when it is determined that packet denial is greater than a desired threshold amount.” The present claims require determining that a given URL component has been rejected at least a certain amount before an exception rule is generated allowing the packet containing the URL component—exactly the concept the Examiner admits is not discussed in Xie. Thus Xie does not teach or suggest “maintaining a frequency for the first URL component, wherein the frequency is a function of a number of occurrences with which messages containing the first URL component was rejected by a rule”

The Examiner further cites Xie, Col. 5, lines 50-52 for this limitation (Office Action, p. 4). Again, this portion of Xie teaches the *opposite* of the pending claims. This portion of Xie describes the following

The dynamic filter 637 generates rules using criteria such as port number and IP address, which are extracted from incoming packets for applications, such as RealAudio, Netmeeting (which uses the H3232 protocol) and network file system (NFS).

For example, when an FTP is initiated, the first sequence of FTP packets, which includes information on the port number and the IP address, will be passed by the rules in the ACL engine 621. The dynamic filter 637 then extracts port number and IP address from this first sequence of packets, and generates new rules, similar to the fixed rules used by the ACL, including these criteria. Later sequences of FTP packets will be denied by the ACL engine 621, but the dynamic filter 637 will pass the packets based on the new, dynamically-generated rules.

These passages illustrate that the dynamic rules of Xie are generated in response to information contained in previously *allowed* traffic (e.g. port numbers in allowed FTP initiation traffic)—the teachings of Xie are to observe previously allowed messages to determine what future traffic should also be allowed. By contrast, the present claims require generating an exception rule responsive to the determined frequency of previously *rejected* URL components exceeding a threshold. Thus Xie does not teach “generating an exception rule for the first URL component and its descendants responsive to the frequency of the first URL component satisfying a set of constraints” as required by the independent claims. Applicant submits that Xie does not suggest such a limitation, because, as described above, Xie’s principle of operation, observing previously allowed messages to determine what future traffic should also be allowed, is the opposite of the present claims, which require observing previously rejected messages to determine future traffic to be allowed.

Applicant further submits that Balasubramanian also does not disclose either of the limitations. Although Balasubramanian describes filtering of URLs, Balasubramanian fails to teach or suggest maintaining any frequency of rejected URL components or generating any exception rules based on such frequencies. Thus Balasubramanian and Xie, either alone or in combination, do not teach or suggest “maintaining a frequency for the first URL component, wherein the frequency is a function of a number of occurrences with which messages containing the first URL component was rejected by a rule” or “generating an exception rule for the first URL component and its descendants responsive to the frequency of the first URL component satisfying a set of constraints” as required by as required by claims 1-4, 6-12, 14-20, 22-29, 31-36, 38-40.

Rejection of claims 5, 13, 21, 30, 37

The Examiner rejected claims 5, 13, 21, 30, and 37 under 35 U.S.C. 103(a) as being unpatentable over Xie in view of Balasubramanian and further in view of U.S. Pub. No. 2004/0250124 (Chesla). As argued above, Balasubramanian and Xie, either alone or in combination, do not teach or “maintaining a frequency for the first URL component, wherein the frequency is a function of a number of occurrences with which messages

containing the first URL component was rejected by a rule” or “generating an exception rule for the first URL component and its descendants responsive to the frequency of the first URL component satisfying a set of constraints.” Applicant respectfully submits that Chesla fails to cure the deficiency.

The portion of Chesla ([0017]) cited by the Examiner simply describes the desirability of a feedback control loop without greater detail. Further reading of Chesla reveals that, as with Xic, the feedback loop of Chesla operates in the *opposite* manner of the present claims. Chesla detects parameters of *malicious* traffic to generate a rule causing subsequent traffic to be *rejected*. (See e.g. Chesla at [0149]). By contrast, the present claims require counting a number of previously rejected URL components to generate a rule causing subsequent traffic to be *allowed*. Thus Chesla does not teach “maintaining a frequency for the first URL component, wherein the frequency is a function of a number of occurrences with which messages containing the first URL component was rejected by a rule” or “generating an exception rule for the first URL component and its descendants responsive to the frequency of the first URL component satisfying a set of constraints.”

**CONCLUSION**

In view of the above remarks, Applicant believes the pending application is in condition for allowance.

Respectfully submitted,  
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